CLAIMS:

1. A method for producing electronic signals representative of images on a source film, comprising the steps of:

illuminating said film with a light source to obtain an illuminated frame;

providing an electronic image sensor;

providing a lens array for projecting said illuminated frame on said electronic image sensor, and providing an aperture in conjunction with said lens array for high spatial frequency cutoff in the image; and

reading out image representative electronic signals from said electronic image sensor.

2. The method as defined by claim 1, further comprising focusing the image of the light source at the plane of said aperture, said image of the light source being less than one-fifth the size of said aperture.

3. The method as defined by claim 2, wherein said focusing step comprises focusing with a field lens.

4. The method as defined by claim 2, wherein said step of providing an aperture comprises providing an aperture having a shape matched to the pixel pattern of said image sensor.

5. The method as defined by claim 2, wherein said step of providing an aperture comprises providing a rectangular aperture.

6. The method as defined by claim 2, wherein said step of providing an aperture comprising providing a square aperture.

7. The method as defined by claim 2, wherein said step of providing an aperture comprises providing a hexagonal aperture.

8. The method as defined by claim 2, wherein said step of providing an aperture comprises providing a diamond shaped aperture.

9. The method as defined by claim 2, wherein said step of providing an aperture comprises providing an aperture having a high frequency cutoff in the range 0.7 to 1.4 times the Nyquist limit for the pixel spacing of said image sensor.

10. The method as defined by claim 3, wherein said step of providing an aperture comprises providing an aperture having a high frequency cutoff in the range 0.7 to 1.4 times the Nyquist limit for the pixel spacing of said image sensor.

11. The method as defined by claim 4, wherein said step of providing an aperture comprises providing an aperture having a high frequency cutoff in the range 0.7 to 1.4 times the Nyquist limit for the pixel spacing of said image sensor.

12. The method as defined by claim 2, further comprising the step of adjusting the size of said aperture.

13. The method as defined by claim 4, further comprising the step of adjusting the size of said aperture.

14. The method as defined by claim 2, further comprising the step of closing down said aperture until alias frequencies from the film grain are removed.

15. The method as defined by claim 4, further comprising the step of closing down said aperture until alias frequencies from the film grain are removed.

16. The method as defined by claim 2, wherein said step of illuminating said film with a light source comprises providing a laser beam and a beam expander.

17. The method as defined by claim 2, where said step of providing a lens array comprises providing a copy lens array, and said step of providing an aperture

comprises providing said aperture within said copy lens array.

18. The method as defined by claim 4, where said step of providing a lens array comprises providing a copy lens array, and said step of providing an aperture comprises providing said aperture within said copy lens array.

19. The method as defined by claim 2, further comprising the step of storing said image- representative signals.

20. The method as defined by claim 2, further comprising the step of storing said image-representative signals as digital signals.

21. The method as defined by claim 2, wherein said step of illuminating said film with a light source comprises illuminating said film sequentially with different colored light.

22. The method as defined by claim 2, further including recording, on an object film, images represented by said electronic signals, said recording incldуing the steps of:

providing a further light source;

providing an electro-optical medium that receives image-

representative electronic signals and also receives input light from the further light source, and produces output light containing the image represented by said electronic signals;

providing a further lens array for projecting said output light onto said object film, and providing a further aperture in conjunction with said lens array for high spatial frequency cutoff in the image.

23. The method as defined by claim 4, further including recording, on an object film, images represented by said electronic signals, said recording including the steps of:

providing a further light source;

providing an electro-optical medium that receives image-representative electronic signals and also receives input light from the further light source, and produces output light containing the image represented by said electronic signals;

providing a lens array for projecting said output light onto said object film, and providing a further aperture in conjunction with said lens array for high spatial frequency cutoff in the image.

24. The method as defined by claim 10, further including recording, on an object film, images represented by said electronic signals, said recording incldуing the steps

of:

providing a further light source;

providing an electro-optical medium that receives image-representative electronic signals and also receives input light from the further light source, and produces output light containing the image represented by said electronic signals;

providing a lens array for projecting said output light onto said object film, and providing a further aperture in conjunction with said lens array for high spatial frequency cutoff in the image.

25. The method as defined by claim 23, wherein said step of providing an electro-optical medium comprises providing an electro-optical panel.

26. The method as defined by claim 25, wherein said step of providing an electro-optical panel comprises providing a liquid crystal panel.

27. The method as defined by claim 22, further comprising focusing the image of the light source at the plane of said aperture, said image of the light source being less than one-fifth the size of said aperture.

28. The method as defined by claim 25, further comprising focusing the image of

the light source at the plane of said aperture, said image of thé light source being less than one-fifth the size of said aperture.

29. The method as defined by claim 28, wherein said step of focusing of the image of the light source comprises focusing with a further field lens.

30. The method as defined by claim 25 wherein said step of providing a further aperture comprises providing an aperture having a shape matched to the pixel pattern of said electro-optical panel.

31. The method as defined by claim 27, wherein said step of providing a further aperture comprises providing a rectangular aperture.

32. The method as defined by claim 27, wherein said step of providing a further aperture comprising providing a square aperture.

33. The method as defined by claim 27, wherein said step of providing a further aperture comprises providing a hexagonal aperture.

34. The method as defined by claim 27, wherein said step of providing a further aperture comprises providing a diamond shaped aperture.

35. The method as defined by claim 27, wherein said step of providing a further aperture comprises providing an aperture having a high frequency cutoff in the range 0.7 to 1.4 times the Nyquist limit for the pixel spacing of said electro-optical panel.

36. The method as defined by claim 28, wherein said step of providing a further aperture comprises providing an aperture having a high frequency cutoff in the range 0.7 to 1.4 times the Nyquist limit for the pixel spacing of said electro-optical panel.

37. The method as defined by claim 27, further comprising the step of adjusting the size of said further aperture.

38. The method as defined by claim 27, where said step of providing a further lens array comprises providing a camera lens array, and said step of providing a further aperture comprises providing said aperture within said further copy lens array.

39. The method as defined by claim 28, where said step of providing a further lens array comprises providing a camera lens array, and said step of providing a further aperture comprises providing said aperture within said further copy lens array.

40. The method as defined by claim 27 wherein said step of providing a further

light source comprises providing, sequentially, different colored light sources.

41. A method for recording, on an object film, images represented by electronic signals, comprising the steps of:

providing a light source;

providing an electro-optical medium that receives image-representative electronic signals and also receives input light from the light source, and produces output light containing the image represented by said electronic signals;

providing a lens array for projecting said output light onto said object film, and providing an aperture in conjunction with said lens array for high spatial frequency cutoff in the image.

42. The method as defined by claim 41, wherein said step of providing an electro-optical medium comprises providing an electro-optical panel.

43. The method as defined by claim 42, wherein said step of providing an electro-optical panel comprises providing a liquid crystal panel.

44. The method as defined by claim 42, further comprising focusing the image of the light source at the plane of said aperture, said image of the light source being less than one-fifth the size of said aperture.

45. The method as defined by claim 44, wherein said step of focusing the image of said light source comprises focusing with a field lens.

46. The method as defined by claim 44, wherein said step of providing an aperture comprises providing an aperture having a shape matched to the pixel pattern of said electro-optical panel.

47. The method as defined by claim 44, wherein said step of providing an aperture comprises providing a rectangular aperture.

48. The method as defined by claim 44, wherein said step of providing an aperture comprising providing a square aperture.

49. The method as defined by claim 44, wherein said step of providing an aperture comprises providing a hexagonal aperture.

50. The method as defined by claim 44, wherein said step of providing an aperture comprises providing a diamond shaped aperture.

51. The method as defined by claim 44, wherein said step of providing an aperture comprises providing an aperture having a high frequency cutoff in the range

0.7 to 1.4 times the Nyquist limit for the pixel spacing of said electro-optical panel.

52. The method as defined by claim 45, wherein said step of providing an aperture comprises providing an aperture having a high frequency cutoff in the range 0.7 to 1.4 times the Nyquist limit for the pixel spacing of said electro-optical panel.

53. The method as defined by claim 44, further comprising the step of adjusting the size of said aperture.

54. The method as defined by claim 45, further comprising the step of adjusting the size of said aperture.

55. The method as defined by claim 44, wherein said step of providing a light source comprises providing a laser beam and a beam expander.

56. The method as defined by claim 44, where said step of providing a lens array comprises providing a camera lens array, and said step of providing an aperture comprises providing said aperture within said camera lens array.

57. The method as defined by claim 51, where said step of providing a lens array comprises providing a camera lens array, and said step of providing an aperture

comprises providing said aperture within said camera lens array.

58. The method as defined by claim 44, wherein said step of providing a light source comprises providing, sequentially, different colored light sources.

59. Apparatus for producing electronic signals representative of images on a source film, comprising the steps of:

means for illuminating said film with a light source to obtain an illuminated frame;

an electronic image sensor;

a lens array for projecting said illuminated frame on said electronic image sensor, and an aperture in conjunction with said lens array for implementing high spatial frequency cutoff in the image; and

means for reading out image representative electronic signals from said electronic image sensor.

60. Apparatus as defined by claim 59, further comprising means for focusing the image of the light source at the plane of said aperture, said image of the light source being less than one-fifth the size of said aperature.

61. Apparatus as defined by claim 60, wherein said focusing means comprises a

field lens.

62. Apparatus as defined by claim 60, wherein said aperture has a shape matched to the pixel shape of said image sensor.

63. Apparatus as defined by claim 60, wherein said step aperture has a high frequency cutoff in the range 0.7 to 1.4 times the Nyquist limit for the pixel spacing of said image sensor.

64. Apparatus as defined by claim 60, where said lens array comprises a copy lens array, and said aperture is disposed within said copy lens array.

65. Apparatus for recording, on an object film, images represented by electronic signals, comprising:

a light source;

an electro-optical medium that receives image-representative electronic signals and also receives input light from the light source, and produces output light containing the image represented by said electronic signals; and

a lens array for projecting said output light onto said object film, and an aperture in conjunction with said lens array for high spatial frequency cutoff in the image.

66. Apparatus as defined by claim 65, wherein said electro-optical medium comprises an electro-optical panel.

67. Apparatus as defined by claim 66, wherein said electro-optical panel comprises a liquid crystal panel.

68. Apparatus as defined by claim 66, further comprising means for focusing the image of the light source at the plane of said aperture, said image of the light source being less than one-fifth the size of said aperture.

69. Apparatus as defined by claim 68, wherein said means for focusing the image of the light source comprises a field lens.

70. Apparatus as defined by claim 68, wherein said aperture has a shape matched to the pixel pattern of said electro-optical panel.

71. Apparatus as defined by claim 68, wherein said aperture has a high frequency cutoff in the range 0.7 to 1.4 times the Nyquist limit for the pixel spacing of said electro-optical panel.

72. Apparatus as defined by claim 68, wherein said light source comprises a laser beam and a beam expander.

73. Apparatus as defined by claim 68, where said lens array comprises a camera lens array, and said aperture is disposed within said camera lens array.

74. A method for producing electronic signals representative of images on a source film, comprising the steps of:

illuminating said film with a light source to obtain an illuminated frame;

providing an electronic image sensor;

providing a lens array for projecting said illuminated frame on said electronic image sensor;

providing an optical filter having a high spatial frequency cutoff in the image; and

reading out image representative electronic signals from said electronic image sensor.

75. A method for recording, on an object film, images represented by electronic signals, comprising the steps of:

providing a light source;

providing an electro-optical medium that receives image-representative

electronic signals and also receives input light from the light source, and produces output light containing the image represented by said electronic signals;

providing a lens array for projecting said output light onto said object film; and

providing an optical filter for high spatial frequency cutoff in the image.